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A New *Vexillum* (Mitridae) from the Philippine Islands

by

JEAN M. CATE

Conchological Club of Southern California, Los Angeles 7, California

(Plates 1 and 2 and one Textfigure)

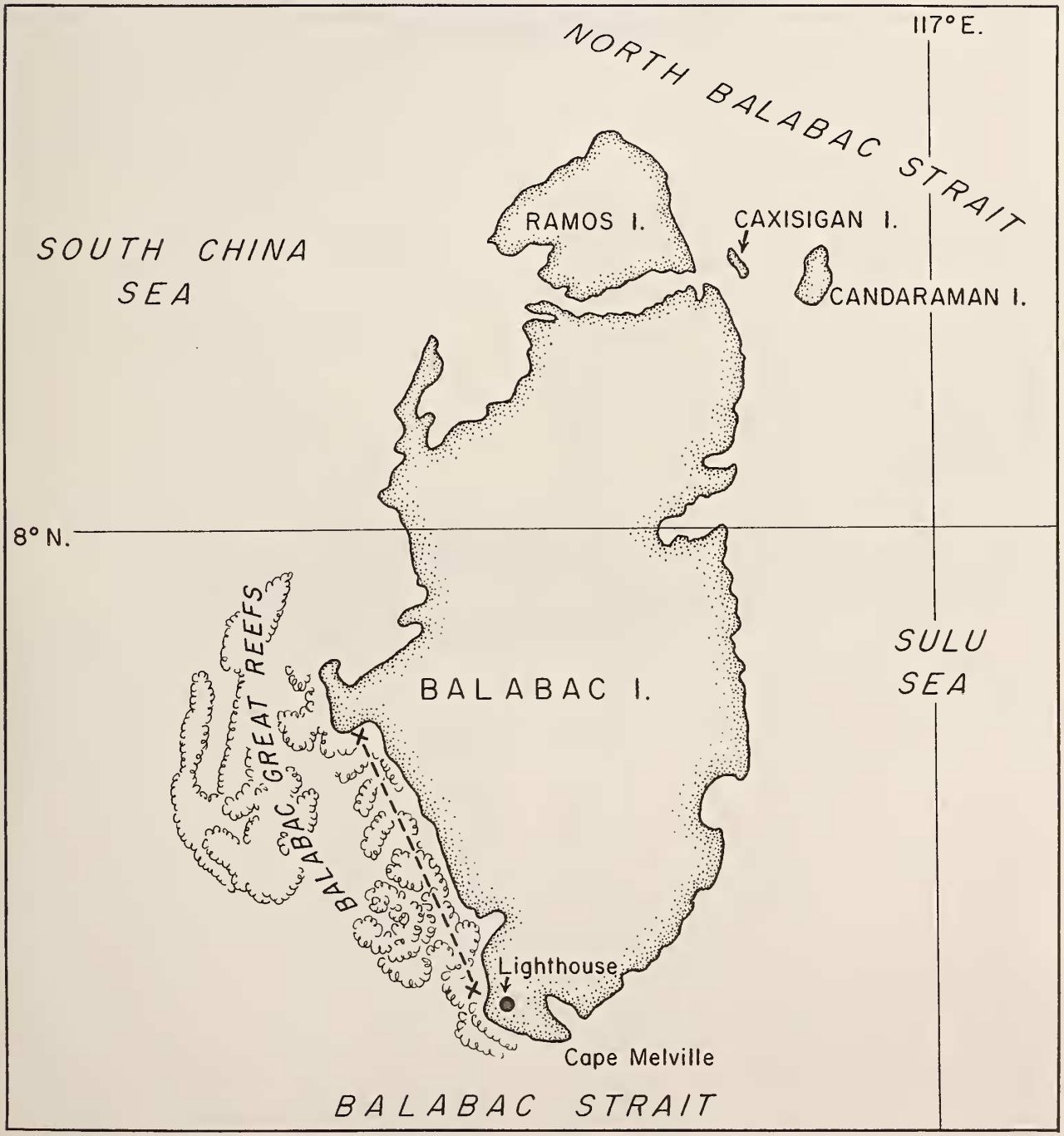
About a year ago I received a shipment of Mitra species from various parts of the Philippine Archipelago; among these was a specimen from Balabac Island labelled Vexillum regina (Sowerby, 1825) which aroused my curiosity because its color seemed to differ from that of other specimens I had seen. Further investigation brought out that there were several additional differences between this specimen and the typical V. regina: first, it was not sharply shouldered; further, the surface sculpture was far less coarse than in Sowerby's original figure of V. regina, and the color pattern was arranged in a different manner. In the course of working out a solution as to what this species might be, additional problems arose involving other closely related species; these, however, will be dealt with in a subsequent paper.

A careful search through all the known monographs and many other papers on Mitridae failed to turn up anything resembling the Balabac species. It therefore seemed likely that this was an undescribed taxon, but as nearly 100 years had passed since the last comprehensive monograph had been compiled for the family Mitridae, this was not an adequate basis for describing a new species. Consequently, in addition to perusal of all available literature, as thorough a search as possible was made among many of the larger museums and private collections to make certain that this species was indeed new and hitherto undescribed. This search turned up two specimens, also labelled Vexillum regina (Sowerby, 1825), which match my specimen fairly closely; both are from private collections and were collected in the southern Philippines.

Wherever it was not possible to visit collections personally, Ektachrome color transparencies of the dorsal and ventral aspects ($\frac{2}{3}$ actual size) were submitted for comparison with other collections; without exception these transparencies were returned promptly and with a notation to the effect that nothing similar existed in that particular collection. Most of the responses stated that it superficially resembled Vexillum regina (Sowerby, 1825). Regrettably, due to a change in personnel taking place at the time of this search, the Mollusca Section of the British Museum (Natural History) was not able to compare the photographs with the specimens in its collection; it is felt, however, that the remaining institutional and private collections which participated represent a good cross-section of the material available in this Vexillum complex. For the prompt and courteous response so willingly given in all instances, I wish to express my gratitude to the following persons and institutions cooperating: Dr. William J. Clench and Dr. Ruth D. Turner, Museum of Comparative Zoology, Harvard University; Dr. Alan Solem, Chicago Natural History Museum; Mr. William Old, Jr., New York Museum of Natural History; Dr. Myra Keen, Stanford University; Dr. Leo G. Hertlein, Cali-

fornia Academy of Sciences; Dr. Joseph Rosewater, U. S. National Museum; Dr. Robert Robertson, Academy of Natural Sciences of Philadelphia; Mr. and Mrs. E. P. Chace, San Diego Museum of Natural History; Mr. George Kanakoff and Miss Joan Troesch, Los Angeles County Museum; Mr. Fernando Dayrit, National Museum, Manila; Mr. and Mrs. John Q. Burch; Mr. and Mrs. F. K. Hadley; Mr. Anthony d'Attilio; Mr. James Bailey; Mrs. Mary Saul; Mrs. Z. W. Craine; Dr. Howard R. Hill; Mr. Ditlev Thaanum, and Mr. E. W. Ulrich.

With the likelihood established that a new species was involved, further correspondence was indicated in order to obtain as much ecological information as possible. Mr. Fernando Dayrit of Manila, who sent the original shipment of shells containing the specimen in question, has kindly furnished from his personal experiences and observations much additional information pertaining to the Balabac region.



The island of Balabac (see map), just north of Borneo, is very sparsely populated by a tribe known as Melebuganon Moros, numbering altogether not over 2,000 individuals. These people differ from the less isolated and better-known Moros of the Sulu Archipelago in several ways: they live in shacks at the edge of the forest instead of in stilt-houses built high above the water; they confine themselves to the relatively small area of Balabac, seldom venturing away from the island, whereas the Moros of the Sulu Sea islands are more inclined to be seafarers. The Melebuganons prefer dry land under all circumstances to any contact with water; therefore they do no diving of any sort and the shells they collect for food or for barter are always taken at low tide in water no more than knee-deep.

The favorite and most profitable collecting locality for shells at Balabac is a small beach to the northwest of the lighthouse at Cape Melville; the shell of the new species was collected here on the reef, on the patches of sand between coral heads. Fringing coral reefs border the shoreline at this point, and at low tide a wide area is exposed, giving easy access to the reef-dwelling mollusks. Offshore, in the Balabac Strait which separates the island from British North Borneo, there is a swift current, particularly during the change of tides, making navigation especially hazardous in view of the submerged coral reefs. It is quite possible that this condition is responsible for the natives' reluctance to venture further afield, especially when one realizes the nearest land was until recently inhabited by the head-hunting savages of North Borneo. On the other hand, a personal letter from Mrs. Mary Saul of Kudat, North Borneo (January 1961) states that the more adventureous natives of her country frequently cross the Balabac Strait (a distance of only a few miles) and collect shells — quite possibly on this same beach at Cape Melville. For about six months Mrs. Saul has been watching for additional specimens of the new species among the material brought in by her collectors for barter at Kudat, but to date she has not seen a shell similar to the one discussed here.

The shallow coral reefs and warm tropical water at Cape Melville furnish a suitable environment for many molluscan species. Among these Mr. Dayrit mentions the following: Conus nobilis Linnaeus, 1758 ("seems to be found only in this area"), C. stramineus Lamarck, 1811, C. pica Adams & Reeve, 1848, C. nocturnus Solander, 1786, C. omaria Bruguière, 1792; Polinices fluctuatus (Sowerby, 1825); Rhinoclavus fasciatus (Bruguière, 1792); assorted Terebras and many others. Mitra species also found living on this reef include M. tigrina A. Adams, 1851, M. dactylus Lamarck, 1811, M. stigmataria Lamarck, 1811, M. episcopalis (Linnaeus) Gmelin, 1790, M. papalis (Linnaeus) Petiver, 1767, M. pontificalis Lamarck, 1811, M. puncticulata Lamarck, 1811, M. filaris (Linnaeus, 1771), Vexillum plicarium (Linnaeus, 1758), V. corrugatum (Lamarck, 1811), and V. vulpecula (Linnaeus, 1758). Vexillum regina (Sowerby, 1825), V. vittatum (Swainson, 1821), and V. taeniatum (Lamarck, 1811) are also mentioned by Mr. Dayrit as coming from Cape Melville, but as there is presently so much confusion regarding their identification, and since they are included in the complex group under consideration in the separate study mentioned above, I believe it unwise to include them in the present faunal list.

Superfamily

VOLUTACEA

Family

MITRIDAE

Subfamily

VEXILLINAE

Genus

Vexillum Röding, 1798

Vexillum coloscopulus J. Cate, spec. nov.

(Plate 1, Figures 1, 2)

Shell long, straight, slender, fusiform, somewhat turriculate; spire longer than the last whorl. Protoconch lacking; teleoconch consisting of 11 slightly convex abutting whorls; sutures impressed, shoulders rounded. Axial sculpture of low, fairly sharp collabral costae (about 13 on penultimate whorl) which tend to become obsolete near outer lip; costae not regularly aligned between sutures. Spiral ornament of low cords, rounded, crenulated and narrow below the sutures, flattened into slightly wider bands at the periphery, again becoming rounded, narrower and faintly granulose at lower part of neck; all spiral cords separated by smooth, shallow, impressed striae. Aperture straight, siphonal canal slightly recurved; labrum thin, simple, about 12 faint lirae within. Parietal ridge present; columella straight, inductura restricted adaperturally; three strong oblique adapical columellar folds and one faint anterior columellar fold. Peristome discontinuous. Siphonal fasciole weakly produced, helicocone nonumbilicate.

Vexillum coloscopulus J. CATE, spec. nov.

Dorsal and Ventral Aspects of Holotype